ABSTRACT OF THE DISCLOSURE

The present invention was achieved in order to provide a method of X-ray inspection whereby the condition of mounting of electronic devices such as BGAs and CSPs steadily getting samller and having higher densities on circuit boards, particularly opens of solder balls and the like, can be precisely judged, and an X-ray inspection apparatus used for the method. The apparatus, wherein an X-ray source to apply X-rays and an X-ray detecting means to detect X-rays are arranged so as to face each other with a sample between, and X-rays emitted from the X-ray source and passing through the sample are detected in the X-ray detecting means, comprises an X-ray incidence plane in the X-ray detecting means being arranged so as to be parallel to an axis S, a swinging means to swing the X-ray detecting means about the axis S as the central axis, as the X-ray incidence plane is kept facing in the same direction all the time, and a rotating means to rotate the X-ray source about the axis S as the axis of rotation in synchronization with the X-ray detecting means.